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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------|-------------|----------------------|---------------------|------------------|
| 10/619,643 | 07/15/2003 | Philippe Schottland | 134400-1 | 8576 |
| 43248 | 7590 | 01/30/2006 | EXAMINER | |
| CANTOR COLBURN LLP | | | RONESI, VICKEY M | |
| 55 GRIFFIN RD SOUTH | | | ART UNIT | |
| BLOOMFIELD, CT 06002 | | | PAPER NUMBER | |
| | | | 1714 | |

DATE MAILED: 01/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/619,643 | SCHOTTLAND ET AL. | |
| | Examiner | Art Unit | |
| | Vickey Ronesi | 1714 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. All outstanding rejections, except for those given below, are withdrawn in light of applicant's amendment filed 11/10/2005.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.
3. The new grounds of rejection set forth below are necessitated by applicant's amendment filed 11/10/2005. In particular, the independent claims have been amended to recite a list of specific polymeric resins. This limitation was not present in the original claims. Thus, the following action is properly made final.

Claim Rejections - 35 USC § 103

4. Claims 1-6, 8-25, 28-30, and 32-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunter (US 3,853,807) in view of Genta (US 3,923,454).

Hunter discloses a polyester composition comprising 500 ppm (0.05 wt %) of 1,8-bis-cyclohexyl amino anthraquinone (col. 6, lines 59-63; col. 7, line 60 to col. 8, line 1) utilized in a polyester film article that was molded (col. 10, lines 7-35). While Hunter does not disclose the purity of the dye, it is the examiner's position that it would have been well within the capabilities of one of ordinary skill in the art to utilize a dye with desired purity, including a purity of 90 wt % or greater. Since Hunter discloses the presently claimed anthraquinone dye in a polymeric resin, it is intrinsic that the dye and the composition give the presently claimed properties since such properties are evidently dependent upon the nature of the material used.

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Hunter teaches that 1,8-bis-cyclohexyl amino anthraquinone tends to spontaneously degrade at the high processing temperatures of poly(ethylene terephthalate).

Genta discloses anthraquinone compositions and teaches that anthraquinones have long been known in the dye art to color a variety of polymers such (e.g., ABS, acrylic, polystyrene, etc) (col. 1, lines 8-10; col. 5, line 51 to col. 6, line 11) and further discloses that anthraquinone dye is used in an amount less 15 %, most preferably from 0.0001% to about 1 % (col. 6, lines 42-46) to form a rigid plastic substrate which is shaped into an article (col. 5, line 41 to col. 6, line 11). The article is made by coloring the resin with the dye through pigmentation processes, i.e., the dye is mixed with the resin using sets of mixing rollers, mixing or milling apparatus (i.e., pelletized) and then shaped into the desired final article form (col. 6, lines 12-32).

Given that anthraquinone dyes such as those of Hunter are commonly utilized as colorant in polymeric resins other than polyester as taught by Genta, it would have been obvious to utilize the anthraquinone dye of Hunter in other polymeric resins. Thus, it would have been obvious to one of ordinary skill in the art to utilize an anthraquinone dye as disclosed by Hunter in a purity greater than or equal to 90 wt % in a polymeric resin and processed as taught by Genta.

Although Hunter does not disclose the properties of the anthraquinone dye alone and the composition with the anthraquinone dye, it is the examiner's position that given Hunter discloses the presently claimed anthraquinone dye and further given that it is considered obvious to combined Hunter's dye with a polymeric resin as discussed above, it is intrinsic that the dye and composition give the presently claimed properties since such properties are evidently dependent upon the nature of the material used.

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5. Claims 1-26, 28-30, and 32-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al (US 5,882,358) in view of the combined teachings of Orelup (US 4,735,631) and Genta (US 3,923,454).

The rejection is adequately set forth in paragraph 11 of Office action mailed 9/26/2005 and is incorporated here by reference.

6. Claims 1-13, 16-26, 28-30, and 32-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turner et al (GB 985,970) in view of the combined teachings of Priester et al (US 4,655,970) and Genta (US 3,923,454).

The rejection is adequately set forth in paragraph 12 of Office action mailed 9/26/2005 and is incorporated here by reference.

7. Claims 27 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Smith et al (US 5,882,358) in view of the combined teachings of Orelup (US 4,735,631) and Genta (US 3,923,454) or Turner et al (GB 985,970) in view of the combined teachings of Priester et al (US 4,655,970) and Genta (US 3,923,454), either of which and further in view of Adachi et al (US 5,747,632).

The rejection is adequately set forth in paragraph 13 of Office action mailed 9/26/2005 and is incorporated here by reference.

Response to Arguments

8. Applicant's arguments filed 11/10/2005 have been fully considered but they are not persuasive. Specifically, applicant argues (A) that Oretup never discloses 1,8-diaminoanthraquinones for use as petroleum markers; (B) that Genta fails to teaching that 1,8-diaminoanthraquinones free of phenylsulfonyl groups can be used for coloring polymeric resins; and (C) that Priester is nonanalogous art since it only discloses 1,4-diaminoanthraquinone dyes and thus is not relevant to the 1,8-diaminoanthraquinone of Turner et al and since Turner et al is directed to treating mouse infections;

With respect to argument (A), Oretup was relied on for its teachings of anthraquinones as tagging materials, not specifically in transmission fluid. Even though Oretup does not teach transmission fluids, it is the examiner's position that the use of anthraquinones as tagging compounds (and just as tagging compounds in transmission fluids) is sufficient to teach the anthraquinones of Smith et al into the polymeric resins taught by Genta.

With respect to argument (B), note that Genta teaches in its background that it is known to use anthraquinones in polymeric materials (col. 1, lines 12-15), whether or not they have phenylsulfonyl groups.

With respect to argument (C), Turner et al teaches both 1,4- *and* 1,8-diaminoanthraquinone compounds. Given that Priester teaches substituents like those taught in the diaminoanthraquinone of Turner et al, it remains to be the examiner's position that Priester is relevant art. In particular, Turner et al also teaches that its compounds give off some color (page 2, lines 25-36). The fact that Turner et al is drawn to treating infections in mice does not necessarily teach away from the use of its diaminoanthraquinone as a dye in polymeric materials.

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Given that the compounds are related by structure, regardless of function, it is clear that Turner et al and Priester are analogous art and would thus lead one of ordinary skill in the art to utilize the diaminoanthraquinone compounds of Turner et al as a dye in polymeric resin.

Allowable Subject Matter

9. Claim 37 is allowed.

The following is a statement of reasons for the indication of allowable subject matter: the prior fails to disclose an R group of an allyl group, a 5-membered heterocyclic ring, or a 6-membered heterocyclic ring of an 1,8-diaminoanthraquinone wherein one of the substituents R₂-R₇ is not a hydroxy, alkoxy, aryloxy, or NR₂.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

1/23/2006

vr



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